



Rimkus Consulting Group, Inc.
198 Charmant Drive, Suite 4
Ridgeland, Mississippi 39157
(601) 898-4738 Telephone
(601) 853-8303 Facsimile

Certificate of Authorization No. E-00001307

February 3, 2006

Mr. Joseph Kahlert
CGI Insurance Company
4350 W. Cypress Street, Suite 225
Tampa Florida 33607

Re: Claim No: 2005002288
Insured: James O. Ray
Subject: Report of Findings
RCG File No: 5221647

Dear Mr. Kahlert:

Mr. Ray reported that his residence was structurally damaged by Hurricane Katrina on August 29, 2005. The residence was located at 470 W. Beach Boulevard in Long Beach, Mississippi.

Rimkus Consulting Group, Inc. was retained by Mr. Joseph Kahlert on behalf of CGI Insurance Company. We were specifically asked to determine the cause of the damage due to the hurricane winds versus the associated storm surge and the waves. Mr. James Overstreet, under the direction of Mr. Thomas E. Heifner, P.E., performed our visual inspection of the property on December 2, 2005. Mr. Ray was present for the inspection and provided information. The weather data used during our evaluation was obtained from Compu-Weather, Inc. and the National Oceanic and Atmospheric Administration (NOAA).

CONCLUSIONS

The following conclusions were made after our site visit and a review of the field notes and the photographs. Our opinions are as follows:

1. The storm surge associated with Hurricane Katrina destroyed the portion of the residence above the concrete foundation slab.
2. We cannot rule out the possibility that the high winds damaged the non-structural components prior to the destruction by the storm surge.

INTRODUCTION

Hurricane Katrina was one of the strongest storms to impact the coast of the United States during the last 100 years. After crossing the Florida peninsula and entering the Gulf of Mexico, Hurricane Katrina strengthened to a Category 5 hurricane as defined by the Saffir-Simpson scale. On August 28, 2005, approximately 250 miles south-southeast of the mouth of the Mississippi River, Hurricane Katrina's winds reached their peak intensity of 175 mph and the atmospheric pressure fell to 902 millibars.

According to the published weather data, the highest wind gusts measured along the Mississippi gulf coast on August 29, 2005 were a 90 mph gust at Keesler Air Force Base in Biloxi; a 63 mph gust at Gulfport-Biloxi Regional Airport in Gulfport; and a 50 mph gust at Naval Station Pascagoula. Winds as high as 125 mph likely occurred near the point of the hurricane's landfall at the Louisiana-Mississippi border.

Along the Mississippi gulf coast, there were reported storm surges of 11.3 feet at Green Pass; 12.1 feet at Pascagoula; and 26.0 feet on the Biloxi River at Wortham, and reports of 30.0 feet in Hancock County.

OBSERVATIONS

The residence was a single story, wood-framed structure constructed on an elevated concrete slab supported on fill material and a perimeter wall. The exterior walls were covered with brick and stucco veneers. The roof framing was covered with metal panels. For purposes of this report, the front of the residence was reference to face south.

Mr. Ray reported that the debris from his residence was found well to the west of his property. Namely parts of the metal roof, parts of the tanning bed, and stucco columns. Mr. Ray presented photographs taken before the storm (**Photograph 1**) and after the storm (**Photograph 2**). In the photograph taken after the storm, it is evident that only the perimeter foundation wall and concrete slab remained. The residence was demolished by the city of Long Beach between the time the photograph was taken and by the time of our inspection.

During the course of our site visit, we observed the following:

- We observed that the southern elevation of the residence faced the Gulf of Mexico and was approximately 100 yards from the beach.
- We observed that nothing remained of the residence except the steps on the southern side, and on the western side of the structure.
- We observed that there were many broken, twisted, and uprooted trees in the area (**Photographs 4, 5 & 6**).

- Heavy debris was deposited north of the footprint of the house (**Photograph 8**).
- Trees in the area had scrape marks and impact damage on the bark (**Photograph 5**).

ANALYSIS

The weather data showed that the wind speeds in the Long Beach region were approximately 110 mph to 120 mph, and that a storm surge of 11-feet to 30-feet occurred. The lateral pressure from wave action typically exceeds wind loads, not including dynamic lateral forces from the wave action.

The residence was destroyed as a result of the storm surge. The proximity of the residence to the Gulf of Mexico combined with the reported storm surge for the area indicated that the residence was likely destroyed by the application of the high lateral pressures of the storm surge and the associated wave action that occurred this close to the Gulf of Mexico.

Additionally, wind speeds reportedly exceeded 100 mph, and we cannot rule out that damage from the wind caused limited damage to the non-structural building components such as the roof coverings, siding or the awnings. However, the significant damage to the structure resulted from the storm surge.

This report was prepared for the exclusive use of CGI Insurance Company, and was not intended for any other purpose. Our report was based on information made available to us at the time of our inspection. Should additional information become available, we reserve the right to determine the impact, if any, the new information may have on our opinions and conclusions and to revise our opinions and conclusions if necessary and warranted. Photographs taken during our work are retained in our files and are available to you upon request.

If you have any questions or need additional assistance, please call.

Sincerely,

RIMKUS CONSULTING GROUP, INC.

James Overstreet
James Overstreet (CS)
Consultant

Attachments: Photographs

Thomas E. Heifner
Thomas E. Heifner, P.E.
Mississippi Reg. Eng. No. 7727
Senior Consultant

